

REMARKS/ARGUMENTS

Favorable reconsideration of this application in view of the above amendment and following remarks is respectfully requested.

Claims 16-30, 32, and 34 are pending. In the present amendment, Claims 16-30, 32, and 34 are amended; and Claims 31, 33, and 35 are canceled without prejudice or disclaimer. Support for the present amendment can be found in the original specification, for example, at page 10, line 31 to page 11, line 8, and in Figure 3. Thus, it is respectfully submitted that no new matter is added.

In the outstanding Office Action, Claims 16-35 were rejected under 35 U.S.C. § 112, second paragraph; Claims 16-18, 26, and 29-33 were rejected under 35 U.S.C. § 102(b) as anticipated by Zahrah et al. (U.S. Patent No. 6,402,500, hereinafter “Zahrah”); Claims 19-24, 34, and 35 were rejected under 35 U.S.C. § 103(a) as unpatentable over Zahrah in view of Souers et al. (U.S. Patent No. 5,296,202, hereinafter “Souers”); Claim 25 was rejected under 35 U.S.C. § 103(a) as unpatentable over Zahrah in view of Souers and Olson et al. (U.S. Patent No. 4,437,613, hereinafter “Olson”); and Claims 27-28 were rejected under 35 U.S.C. § 103(a) as unpatentable over Zahrah in view of Bottoms (U.S. Patent No. 3,780,887).

In response to the rejection under 35 U.S.C. § 112, second paragraph, the claims are hereby amended to cure the issues cited in the Office Action. Specifically, the claims no longer recite a “precise location” of the mold. Further, Claims 31, 33, and 35 are hereby canceled. In view of the amended claims, it is believed that all pending claims are definite and no further rejections on that basis are anticipated. However, if the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work with the Examiner in a joint effort to derive mutually acceptable language.

Turning now to the rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a), Applicant respectfully requests reconsideration of these rejections and traverses these rejections, as discussed below.

Amended Claim 16 recites:

A system comprising at least one mold and a device for filling the at least one mold with at least one powder,

the mold having an internal volume virtually divided into an array of several sections and the device comprising:

means for adding the at least one powder into the filling device;

at least one means for ejecting the powder added into the filling device in a form of a layer; and

at least one deflector placed above the mold, each of the at least one deflectors being placed above at least one, but not all, of the sections of the mold, the at least one deflector being configured to locally intercept at least part of the powder ejected in the form of a layer and redirect locally intercepted powder towards the section of the mold above which the at least one deflector is placed.

The system described in amended Claim 16 includes at least one mold and a filling device with a deflector that changes the direction of the powder that collides with the deflector. The deflector is placed above a section of the mold, intercepts at least part of the ejected powder, and redirects this intercepted powder towards the section of the mold. As shown in Fig. 3, the internal volume of the mold is virtually divided into an array of several sections and the “precise location” previously recited in the claims is amended to recite the section above which the deflector is located. Assuming that all the internal volume of the mold is virtually divided into an array of section, then the at least one deflectors will be positioned above at least one, but not all, of these sections. For example, in Fig. 3, the internal volume of the mold can be divided into two sections (projections of the limits of these two sections are shown in Fig. 3 by a dashed line). As shown in Fig. 3 by the location

of the falling powder, the deflector 19 is located above a small section and the deflectors 16, 17, 18 are located above a larger section. It is respectfully submitted that the cited references do not disclose or suggest every feature recited in amended Claim 16.

Zahrah describes a delivery and filling system for filling a cavity with a particulate material. The system includes a mini-hopper 10, a transport device 102, and a gas control unit.¹ The mini-hopper 10 and the transport device each have a porous distributor plate 105, through which a gas can be flown.² In the system of Zahrah, only the bottom surface of the bed of particulate material present in the mini-hopper 10 and the transport device 102 becomes fluidized by migration of the compressed gas through the porous distributor plate 105, in order to prevent powder segregation and any dusting of fine particles.³ The central fluidizer 114 acts like a powder valve when the gas is turned on and off: when the gas is turned on, particulate material flows into the container and when gas is turned off, the flow of particulate material is cut-off immediately.⁴

A porous distributor plate 105 is placed at an incline to the side of the cavity 110.⁵ When the gas of the central fluidizer 114 is turned on, the powder 120 is freed from the central fluidizer 114, falls en masse into the space above the mold, and is funneled into the mold.⁶ According to Figure 4B of Zahrah, because the diameter of the volume of powder 120 present above the mold is larger than the diameter of the mouth of the cavity 110, the totality of the mold is filled at the same time.

However, it is respectfully submitted that Zahrah does not disclose or suggest “at least one means for ejecting the powder added into the filling device in a form of a layer; and at least one deflector placed above the mold, each of the at least one deflectors being placed

¹ See Zahrah, at col. 3, lines 8-9.

² See Zahrah, at col. 3, lines 10-27.

³ See Zahrah, at col. 16, line 65 to col. 17, line 3.

⁴ See Zahrah, at col. 4, lines 32-37, at col. 12, lines 51-54, and at col. 8, lines 57-61.

⁵ See Zahrah, in Figure 4A.

⁶ See Zahrah, in Figures 4A and 4B.

above at least one, but not all, of the sections of the mold, the at least one deflector being configured to locally intercept at least part of the powder ejected in the form of a layer and redirect locally intercepted powder towards the section of the mold above which the at least one deflector is placed,” as recited in amended Claim 16.

Instead, as seen in Figure 4B of Zahrah, when the gas is turned on, the powder is released from the delivery chute in particulate form. Zahrah further states that “the use of low gas pressure ensures that only a thin layer of powder near the porous distributor plate 152 **is loosened** to eliminate or minimize dusting and segregation.”⁷ Thus, the powder is not ejected “*in the form of a layer*” of powder, as recited in amended Claim 16.

Not only does the device of Zahrah not eject the powder in the form of a layer, according to Figures 4A and 4B of Zahrah, the porous distributor plate 105 is placed at an incline to the side of the cavity 110. Thus, the porous distributor plate 105 is not “placed above at least one, but not all, of the sections of the mold,” as recited in amended Claim 16. Because the plate 105 is not placed above the mold, the plate 105 also cannot redirect powder in the form of a layer “towards the section of the mold above which the at least one deflector is placed.”

Accordingly, it is respectfully requested that the rejection of Claim 16, and all claims dependent thereon, as anticipated by Zahrah be withdrawn.

Regarding the rejections of Claims 17-30, 32, and 34, it is noted that Claims 17-30, 32, and 34 depend on Claim 16, and thus are believed to be patentable for at least the reasons discussed above with respect to Claim 16. Further, it is respectfully submitted that the remaining cited references (Souers, Olson, and Bottoms) do not cure any of the above-noted deficiencies of Zahrah. The apparatus in both Souers and Olson do not include “at least one deflector placed above the mold, each of the at least one deflectors being placed above at

⁷ See Zahrah, at col. 17, lines 42-47.

least one, but not all, of the sections of the mold, the at least one deflector being configured to locally intercept at least part of the powder ejected in the form of a layer and redirect locally intercepted powder towards the section of the mold above which the at least one deflector is placed.” Further, Bottoms describes an apparatus for uniformly distributing heterogeneous particles in a vessel by amount and particle size *radially from an axis of rotation* at each level in the vessel.⁸ In the apparatus of Bottoms, there is no deflector at the exit of the powder distributing means: the dividers 7, 21 are inside the powder distributing means. Moreover, there is no deflector in Bottoms which intercepts at least part of the powder when the powder exits the powder distributing means.

Accordingly, it is respectfully submitted that the rejections of Claims 17-30, 32, and 34 be withdrawn.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. A Notice of Allowance is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Philippe J.C. Signore, Ph.D.
Attorney of Record
Registration No. 43,922

Adnan H. Bohri
Registration No. 62,648

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/07)

⁸ See Bottoms, at col. 1, lines 17-19.